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having human telomerase catalytic activity when complexed with a telomerase RNA, wherein said polynucleotide hybridizes under stringent conditions to a polynucleotide having a sequence complementary to SEQ ID NO: 1.

- 24. (New) The expression vector of claim 23, further comprising a regulatory sequence selected from a promoter, an enhancer, and a 3' untranslated region.
- 25. (New) The expression vector of claim 24, wherein the promoter is selected from an alpha factor promoter, an alcohol oxidase promoter, a PGH promoter, a 35S promoter of CaMV, and a 19S promoter of CaMV.
- 26. (New) The expression vector claim 23, wherein the vector is selected from a recombinant bacteriophage, a plasmid, a cosmid, a yeast expression vector, and a viral expression vector.
- 27. (New) The expression vector of claim 23, wherein the expression vector is selected from a mammalian virus expression vector, an SV40 virus expression vector, an EBV virus expression vector, an Autographa californica nuclear polyhedrosis virus expression vector, an adenovirus expression vector, a retrovirus expression vector, a herpes virus expression vector, and a vaccinia virus expression vector.
- 28. (New) The expression vector of claim 24, wherein the promoter is selected from a constitutive promoter, an inducible promoter, a lacZ promoter, a ptrp-lac hybrid promoter, a polyhedrin promoter, a heat shock promoter, a RUBISCO promoter, and a storage protein gene promoter.

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- 29. (New) The expression vector of claim 23, further comprising a viral origin of replication.
- 30. (New) The expression vector of claim 23, further comprising a selectable marker gene.
- 31. (New) The expression vector of claim 30, wherein the selectable marker gene is selected from herpes simplex virus thymidine kinase, adenine phosphoribosyltransferase, *dhfr*, *npt*, *als*, *pat*, *trpB*, *hisD*, anthocyanin, β glucuronidase, and luciferase.

C'ord.

- 32. (New) A host cell domprising the expression vector of claim 23.
- 33. (New) A host cell comprising the expression vector of claim 24.
- 34. (New) A host cell comprising the expression vector of claim 25.
- 35. (New) A host cell comprising the expression vector of claim 26.
- 36. (New)/A host cell comprising the expression vector of claim 27.
- 37. (New) A host cell comprising the expression vector of claim 28.
- 38. /(New) A host cell comprising the expression vector of claim 29.
- 39./ (New) A host cell comprising the expression vector of claim 30.
- 40. (New) A host cell comprising the expression vector of claim 31.